

REMARKS

**I. Introduction**

In response to the final Office Action dated June 27, 2011, Applicants have amended independent claims 1 and 9 by incorporating the elements of claims 4 and 12 respectively, except that elements “a silicon compound” and “an aluminum compound” are removed. Claims 4 and 12 have been cancelled, without merit. No new matter has been added.

Applicants respectfully submit that all pending claims are patentable over the cited prior art for the reasons set forth below.

**II. Patentability of Claims 1, 3-7, 9 and 11-15 Under 35 U.S.C. § 102 or 103**

Claims 1, 4, 6, 9, 12 and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or under 35 U.S.C. § 103(a) as being unpatentable over Inoue et al. (JP 05-140620); claims 3, 5, 11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Watson et al. (“Synthesis of a novel magnetic photocatalyst by direct deposition of nanosized TiO<sub>2</sub> crystals onto a magnetic core); and claims 7, 14 and 15 as being unpatentable over Inoue in view of Ueta et al. (US 2004/0126609). Applicants respectfully traverse these rejections for at least the following reasons.

Independent claims 1 and 9 each recite, in part, a soft magnetic material comprising a lower film surrounding a surface of said metal magnetic particle and being formed of an oxide of a nonferrous metal satisfying a composition range where oxygen is less than oxygen of a stoichiometry composition of a compound constituted of an element and oxygen, that constitute the lower film, and an insulating upper film surrounding a surface of said lower film and including oxygen. The nonferrous metal includes at least one amorphous metal selected from the group consisting of aluminum, chromium, and silicon. The upper film includes at least one

selected from the group consisting of a phosphorus compound, a zirconium compound and a titanium compound.

Features of independent claims 1 and 9 are that a soft magnetic material is comprised of a lower film surrounding a surface of said metal magnetic particle and being formed of an oxide of a nonferrous metal satisfying a composition range where oxygen is less than oxygen of a stoichiometry composition of a compound constituted of an element and oxygen, and that the upper film includes at least one selected from the group consisting of a phosphorus compound, a zirconium compound and a titanium compound.

Inoue teaches that the upper film is comprised of at least one of aluminum, chromium and silicon. In contrast, amended claims 1 and 9 recite an upper film that includes at least one selected from the group consisting of a phosphorus compound, a zirconium compound and a titanium compound. As such, Inoue does not disclose all of the features of amended independent claims 1 and 9.

Furthermore, it is asserted that Inoue discloses a lower film surrounding a surface of a metal magnetic particle and is formed of an oxide of a nonferrous metal (oxyiron hydroxide in paragraph [0012] of Inoue) satisfying the claimed composition range where oxygen is less than oxygen of a stoichiometry composition of a compound constituted of an element and oxygen that constitute the lower film (see, Abstract and ¶¶ [0004]-[0005]). Applicants respectfully disagree.

Paragraphs [0012]-[0013] of Inoue, as translated recite:

The present invention is carried out in the following manner. For the purposes such as shape retention and sintering prevention, the needle-like iron oxide or iron oxyhydroxide is

surface treated chiefly with an Si compound and an Al compound for example. After this, it is subjected to a treatment of causing fatty acid to adsorb thereto, and the resultant product is fired in an inert nitrogen-gas atmosphere at a temperature of 300 to 650 °C. As the fatty acid to be used, caprylic acid, or various fatty acids from C<sub>8</sub> to C<sub>18</sub> contained in palm oil for example, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, and the like are preferred. In the case where the fatty acid is sold at normal temperature, it is heated into a liquid state and used. After it is fired in the inert atmosphere and reduced into a state close to the composition of magnetite, a reducing gas such as hydrogen gas is used to heat and reduce it at a temperature of 350 to 550 °C. Ferromagnetic metal particles are thus obtained.

The obtained ferromagnetic metal particles are immersed in an organic solvent such as toluene. A wet oxidative stabilization treatment of feeding an oxidized as such as air, or a dry oxidative stabilization treatment of feeding an inert gas such as nitrogen gas and gradually increasing the flow of an oxidized gas such as air is performed to thereby manufacture stable ferromagnetic metal powder in air.

As is clear from the above passages, Inoue discloses that in order to improve the magnetic characteristics of iron oxide or iron oxyhydroxide at the center of a powder particle, a reduction treatment is performed on triple-layer magnetic powder at a temperature of 300 to 650 °C. However, Si compounds and Al compounds that cover the surface layer of the iron oxide or iron oxyhydroxide are not easily reduced, and are not reduced in the temperature range of 300 to 650 °C. Thus, the Si and Al compounds, after being subjected to the reduction treatment, do not satisfy the composition range where oxygen is less than oxygen of a stoichiometry composition as recited in independent claims 1 and 9. Moreover, Inoue does not disclose or suggest that the

Si and Al compounds are reduced, and the features of independent claim 1 and 9 would not be obtained based on Inoue. Accordingly, Inoue fails to teach or suggest all of the limitations of amended claims 1 and 9. Moreover, Watson and Ueta do not, and are not relied upon to remedy this deficiency.

Anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). In addition, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. As Inoue fails, at a minimum, to disclose the limitations of amended independent claims 1 and 9 for the reasons set forth above, claims 1 and 9 are allowable and patentable over the cited prior art. Reconsideration and withdrawal of the rejection of claims 1 and 9 is respectfully solicited.

**III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims. *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 9 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

**IV. Conclusion**

Having responded to all open issues set forth in the Office Action, it is respectfully submitted that all claims are in condition for allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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